

Remarks/Arguments

35 U.S.C. §102

Claims 1, 7, and 13, stand rejected under 35 U.S.C. §102(e) as being anticipated by Zahm (U.S. Patent No. 7136114B2).

It is respectfully asserted that Zahm fails to disclose an apparatus wherein the:

“AGC detecting means includes second filtering means for attenuating a predetermined carrier frequency associated with a second channel adjacent to said first channel,”

as described in currently amended claim 1.

Among the problems addressed by the present invention is the negative impact on automatic gain control systems when a relatively weak signal is being received in the presence of much stronger undesired adjacent signals that overload the tuner and interfere with the reception of the desired signal. To solve these problems, the subject application discloses an apparatus, and associated method, for using a tuner to tune an RF signal on a first channel to generate an IF signal, filtering the IF signal to generate a filtered IF signal, generating an AGC signal responsive to the filtered IF signal, including attenuating a predetermined carrier frequency associated with a second channel adjacent to the first channel, and providing the AGC signal to the tuner. The present invention avoids the need for excessive gain reduction and compensates for interference from both analog and digital signals.

In contrast, Zahm teaches a “television receiver includes a tuner stage, a selective filter stage connected to the tuner stage, and a intermediate-frequency stage connected to the selective filter stage. A field-strength-detection stage is also provided, which generates a field strength signal proportional to the field strength of the received signal. The selective filter stage includes a transfer function that is modifiable by a control signal derived from the field strength signal.” (Zahm Abstract)

Zahm is directed primarily at the problem of low levels of reception in a mobile television receiver. (Zahm, column 1, lines 6-7) Zahm describes determining the sensitivity of a tuner using an AGC signal generated by an IF stage. (Zahm, column 2, lines 55-65) Zahm does not describe specifically attenuating a carrier frequency, such as the audio carrier frequency, associated with an adjacent channel in the AGC process. Thus, it is respectfully submitted that Zahm fails to disclose an apparatus wherein the “AGC detecting means includes second filtering means for attenuating a predetermined carrier frequency associated with a second channel adjacent to said first channel,” as described in currently amended claim 1.

In view of the above remarks and amendments to the claims, it is respectfully asserted that there is no 35 USC 112 enabling disclosure provided by Zahm that makes the present invention as claimed in claim 1 unpatentable. It is further submitted that independent claims 7 and 13 are allowable for at least the same reasons that claim 1 is allowable. Since dependent claims 2-6, 8-12, and 14-18 are dependent from allowable independent claims 1, 7 and 13 respectively, it is submitted that they too are allowable for at least the same reasons that their respective independent claims are allowable. Thus, it is further respectfully submitted that this rejection has been satisfied and should be withdrawn.

35 U.S.C. §103

Claims 2-5, 8-11, 14-17, stand rejected under 35 U.S.C. §103(a) as being unpatentable over Zahm (U.S. Patent No. 7136114B2) and further in view of Rumreich (U.S. Patent No. 5177613).

It is respectfully asserted that neither Zahm nor Rumreich, alone or in combination, disclose an apparatus wherein the “AGC detecting means includes second filtering means for attenuating a predetermined carrier frequency associated with a second channel adjacent to said first channel,” as described in currently amended claim 1.

Rumreich teaches a “low audio buzz television signal processing system. Both the video IF signal and the sound IF signal are filtered by a shared SAW filter without requiring an additional surface acoustic wave (SAW) device for IF sound processing. The required Nyquist slope of the video signal is provided by a contour filter for applying a Nyquist slope characteristic.” (Rumreich Abstract)

Rumreich describes filtering of the IF signal derived from the tuner in the conventional Nyquist slope passband. (Rumreich, column 4, lines 3-14) Rumreich does not describe specifically attenuating a carrier frequency, such as the audio carrier frequency, associated with an adjacent channel in the AGC process. Thus, like Zahm, Rumreich fails to disclose an apparatus wherein the “AGC detecting means includes second filtering means for attenuating a predetermined carrier frequency associated with a second channel adjacent to said first channel,” as described in currently amended claim 1.

Furthermore, since dependent claims 2-5, 8-11, and 14-17 are dependent from independent claims 1, 7 and 13, which are allowable for the reasons described above, it is submitted that they too are allowable for at least the same reasons that their respective independent claims are allowable. Thus, it is further respectfully submitted that this rejection has been satisfied and should be withdrawn.

Claims 6, 12, and 18, stand rejected under 35 U.S.C. §103(a) as being unpatentable over Zahm (U.S. Patent No. 7136114B2) and further in view of Limberg (U.S. Patent No. 6400393B1).

It is respectfully asserted that neither Zahm nor Limberg, alone or in combination, disclose an apparatus wherein the “AGC detecting means includes second filtering means for attenuating a predetermined carrier frequency associated with a second channel adjacent to said first channel,” as described in currently amended claim 1.

Limberg explains that “the frequency-modulated sound carrier of any co-channel interfering NTSC television signal that accompanies multiple-level symbols in a digital receiver, such as a digital television receiver, is suppressed using a surface-acoustic-wave (SAW) filter in the intermediate-frequency (I-F) amplifier circuitry. This reduces data-slicing errors during symbol decoding and improves bit error rate (BER) during subsequent trellis decoding. When a comb filter is used before data slicing to reduce the energy of co-channel interfering NTSC television signal, the SAW filter in the I-F amplifier circuitry eases the filtering requirements on the comb filter such that only video components of co-channel interfering NTSC television signal need be suppressed.” (Limberg Abstract)

Limberg also does not describe specifically attenuating a carrier frequency, such as the audio carrier frequency, associated with an adjacent channel in the AGC process. Thus, like Zahm, Limberg fails to disclose an apparatus wherein the “AGC detecting means includes second filtering means for attenuating a predetermined carrier frequency associated with a second channel adjacent to said first channel,” as described in currently amended claim 1.

Furthermore, since dependent claims 6, 12, and 18 are dependent from independent claims 1, 7, and 13, which are allowable for the reasons described above, it is submitted that they too are allowable for at least the same reasons that their respective independent claims are allowable. Thus, it is further respectfully submitted that this rejection has been satisfied and should be withdrawn.

Having fully addressed the Examiner’s rejections it is believed that, in view of the preceding amendments and remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant’s representative at (609) 734-6804, so that a mutually convenient date and time for a telephonic interview may be scheduled.

No fee is believed due. However, if a fee is due, please charge the additional fee to
Deposit Account 07-0832.

Respectfully submitted,

/brian j cromarty/

By:

Brian J. Cromarty
Reg. No. L0027
Phone (609) 734-6804

Patent Operations
Thomson Licensing Inc.
P.O. Box 5312
Princeton, New Jersey 08543-5312
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